

## Improved method for producing impact-resistant polystyrene

## Abstract

- 5     Process for preparation of impact-resistant polystyrene from diene monomers and from  
styrene monomers via anionic polymerization, where
- 10    1)    in a stage 1) a rubber solution is prepared from the diene monomers, or from the  
diene monomers and from the styrene monomers, using an alkali metal organyl  
compound as initiator and with concomitant use of a solvent, and then
- 15    2)    in a stage 2), styrene monomer is added to the rubber solution, and the resultant  
mixture is polymerized anionically to give the impact-resistant polystyrene,  
and where, after stage 1) and prior to stage 2), an organylaluminum compound  
and an alkali metal hydride are added to the rubber solution.